

**Notice of Allowability**

Application No.

10/517,702

Examiner

Mohammad Meah

Applicant(s)

SODE, KOJI

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/29/06.
2. ☒ The allowed claim(s) is/are 1,4,5,16,17,29 and 30.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### DETAILED ACTION

Claims 1-30 are pending. Claims 2, 3, 6-13 and 18-28 are withdrawn.

Claims 1, 4-5, 16-17 and 29-30 are allowable after following amendments.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given by G. M. Murphy with Telephone on 02/25/2007.

### EXAMINER'S AMENDMENT

Claims 2, 3, 6-13 and 18-28 are cancelled.

In claim 1 line 2 replace -pyrroloquinoline quinone (PQQGDH) as – with--  
pyrroloquinoline quinone glucose dehydrogenase (PQQGDH) having PQQ as---

In claim 16 line 2 replace – an amino acid- with - the amino acid-

The following is an examiner's statement of reasons for allowance:

The following is an examiner's statement of reasons for allowance:

Applicant has modified PQQGDH of SEQ ID NO: 2 from *Acinetobacter calcoaceticus* wherein Thr342 and/or Asp143 of said SEQ ID NO:1 is modified in order to have inhibition constant 200 mM or more. Previous rejection under 35 U.S.C. 102(e) as being anticipated by Breton et al. (US PAT 6562958) is withdrawn because of following reasons: Although Breton 's polypeptide of SEQ ID NO:7466 having an alanine at

Art Unit: 1652

position 342 belongs to GDH polypeptide family and which has 95% sequence identity with the applicant's SEQ ID NO: 1, but does not teach SEQ ID NO: 1 having PQQGDH activity. Since SEQ ID NO: 7466 of Berton et al. does not teach PQQGDH activity and Berton et al. does not also teach polypeptide of SEQ ID NO: 1, one knowledgeable in prior art is not expected to modify PQQGDH of SEQ ID NO: 1 at position 343 in order to have inhibition constant 200 mM or more. As such the modified PQQGDH of SEQ ID NO: 1, from *Acinetobacter calcoaceticus* wherein Thr342 and/or Asp143 of said SEQ ID NO: 2 is modified or kit or glucose sensor comprising said PQQGDH are novel and non-obvious.

Art Unit: 1652

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Meah whose telephone number is 571-272-1261. The examiner can normally be reached on 8:30-5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohammad Younus Meah, PhD

Examiner, Art Unit 1652

Recombinant Enzymes, 3C31 Remsen Bld

400 Dulany Street, Alexandria, VA 22314

Telephone: 517-272-1261

  
REBECCA E. SPOUTY  
PRIMARY EXAMINER  
GROUP 1800  
1652